

April 4, 2005

Mr. James J. Sheppard  
President and Chief Operating Officer  
STP Nuclear Operating Company  
South Texas Project Electric  
Generating Station  
P. O. Box 289  
Wadsworth, TX 77483

SUBJECT: SOUTH TEXAS PROJECT (STP), UNIT 2 - RESPONSE TO U.S.  
NUCLEAR REGULATORY COMMISSION BULLETIN 2003-02, "LEAKAGE  
FROM REACTOR PRESSURE VESSEL LOWER HEAD PENETRATIONS  
AND REACTOR COOLANT PRESSURE BOUNDARY INTEGRITY"  
(TAC NO. MC0567)

Dear Mr. Sheppard:

On August 21, 2003, the U.S. Nuclear Regulatory Commission (NRC) issued NRC Bulletin 2003-02, "Leakage from Reactor Pressure Vessel Lower Head Penetrations and Reactor Coolant Pressure Boundary Integrity," to the industry. This Bulletin informed addressees that current methods of inspecting the reactor pressure vessel (RPV) lower heads may need to be supplemented with bare-metal visual inspections in order to detect reactor coolant pressure boundary leakage and requested these addressees provide the NRC with information related to inspections that have been performed to verify the integrity of the RPV lower head penetrations.

The Bulletin requested that addressees provide a description of the RPV lower head penetration inspection program that would be implemented at their respective plants during the next and subsequent refueling outages. This description was to include the extent of the inspection, the inspection methods to be used, the qualification standards for the inspection methods, the process used to resolve the source of findings of boric acid deposits or corrosion, the inspection documentation to be generated, and the basis for concluding that their plant satisfied applicable regulatory requirements related to the structural and leakage integrity of the RPV lower head penetrations.

By letter dated November 4, 2003, as supplemented by letter dated June 7, 2004, STP Nuclear Operating Company (STPNOC) provided its response to this request for STP, Unit 2. In its November 4, 2003, submittal, STPNOC indicated that bare-metal visual inspections of the STP, Unit 2, RPV lower head penetrations were performed on three occasions during the fall 2002 refueling outage and the subsequent turbine repair forced outage. STPNOC did not observe any evidence of leakage.

Regarding its plans for performing future examinations, in its letter dated July 17, 2003, STPNOC committed to examining the STP, Unit 2 penetrations with a volumetric nondestructive examination method at the next Unit 2 refueling outage where the core barrel is planned to be

removed (currently 2RE11 scheduled for 2005). In its letter dated November 4, 2003, STPNOC indicated that bare-metal visual inspections of the RPV lower head penetrations are performed under its inspection program for boric acid leaks during each refueling outage and selected forced outages.

The Bulletin also requested that addressees provide a summary of the RPV lower head penetration inspection that was performed at their plants, the extent of the inspection and the methods used, a description of the as-found condition of the lower head, any findings of relevant indications of through-wall leakage, and a summary of the disposition of any findings of boric acid deposits and any corrective actions taken as a result of indications found.

By letter dated June 17, 2004, STPNOC provided a summary of its inspection results from the spring 2004 refueling outage at STP, Unit 2. STPNOC reported it had performed a bare-metal visual inspection of the RPV lower head, including an inspection of the entire annulus of each of the 58 RPV lower head penetrations. STPNOC did not observe any evidence of RPV lower head penetration leakage or significant RPV lower head wastage.

Based on its review of STPNOC's responses, the NRC staff finds that STPNOC has met the reporting requirements of the Bulletin for STP, Unit 2. Accordingly, TAC No. MC0567 is closed for STP, Unit 2.

Sincerely,

**/RA/**

David H. Jaffe, Senior Project Manager, Section 1  
Project Directorate IV  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No.: 50-499

cc: See next page

J. Sheppard

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Sincerely,  
**/RA/**

David H. Jaffe, Senior Project Manager, Section 1  
Project Directorate IV  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

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